

## Activity 6

### Reading the Geologic History of Your Community

#### Think About It

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- When you are studying rocks and you identify different rocks, how can you tell which is older and which is younger?



## WHAT DO YOU THINK?

## Activity 6

### Investigate Part A

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1a. Which layer is the “oldest”(has been there the longest)? Which layer is the “youngest”?

2a. Which of the units do you think is the oldest? Which unit do you think is the youngest? How do you know?

3a. Sketch a side view of what you see.

3b. Form the layers into folds. Sketch what you see.

3c. Why do you think that the layers are not horizontal? Number the cross-sections in order.

4a. Sketch what you see.

4b. What is the youngest feature in each of the two cross sections above? How do you know?

5a. Which of these units do you think is older? How do you know?

6a. Are the ages continuous, or do you see any time gaps? Explain.

6b. Can you think of an explanation for why there is a time gap in the record?

## Activity 6

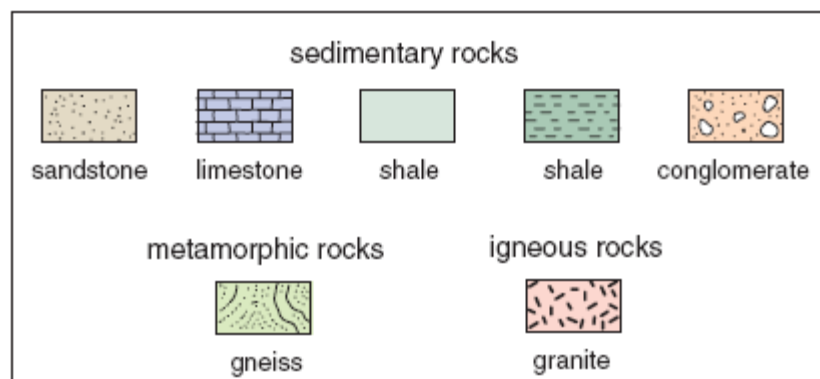
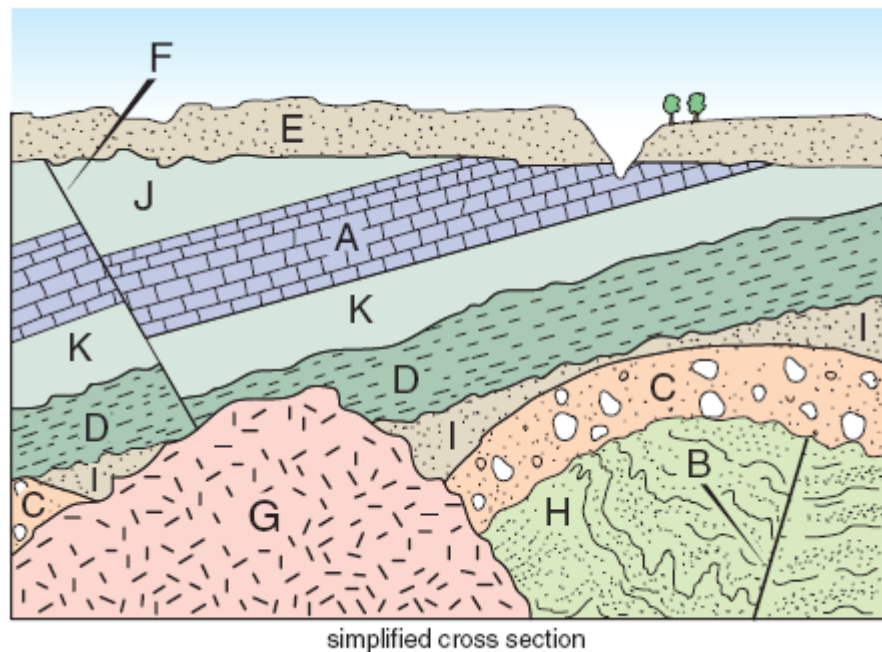
### Investigate Part B

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1. Put the rock units and other geologic features marked with letters in the cross section in order of occurrence from earliest to latest.



## Activity 6

### Digging Deeper

Pages U53-55

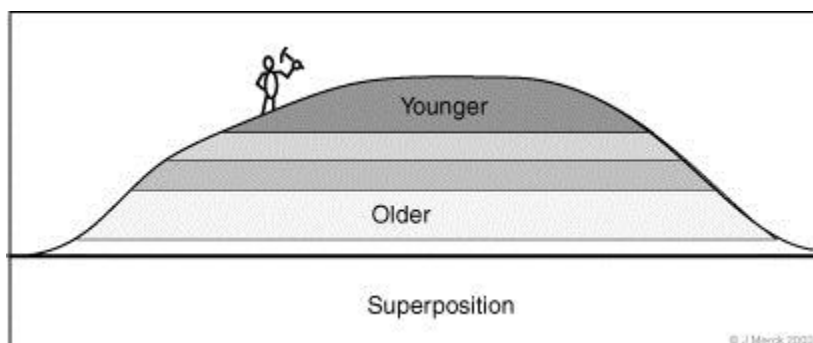
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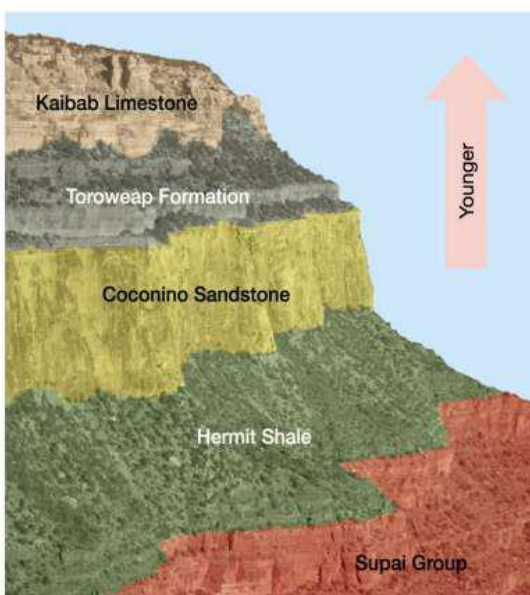
**Learning Objective:** In writing, SWBAT apply basic rock principles in order to determine relative ages of rock layers using academic language.

### **Principle of Superposition**

younger sedimentary and volcanic rocks are deposited on top of older rocks



A.

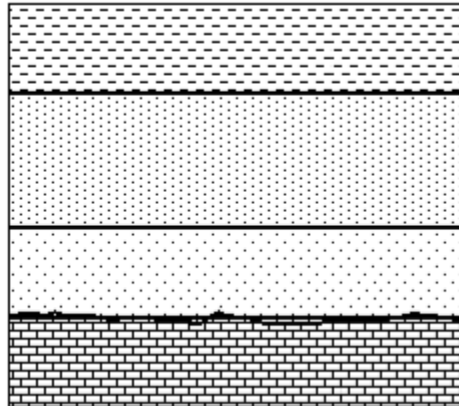


B.

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**Principle of  
Original  
Horizontality**

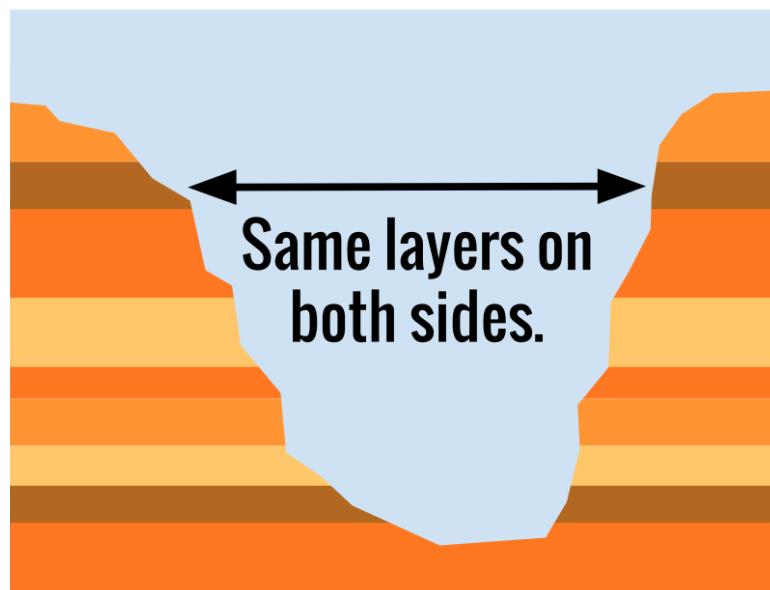
sedimentary and volcanic rocks  
are laid down in almost  
horizontal layers



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**Principle of  
Lateral  
Continuity**

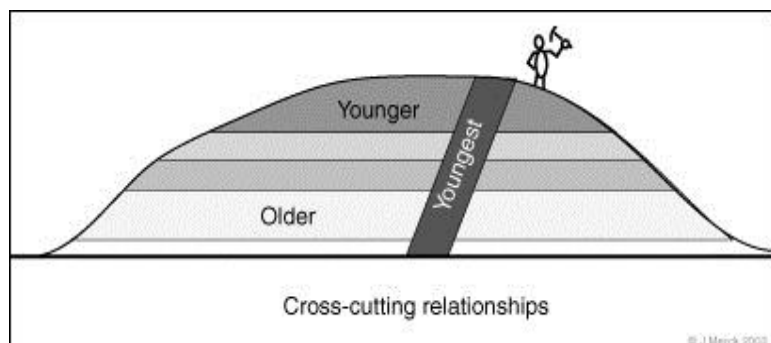
rock layers spread out  
continuously in all directions until  
something stops them





## **Principle of Crosscutting Relationships**

a fault or intrusion is always younger than the rock layers it cuts through



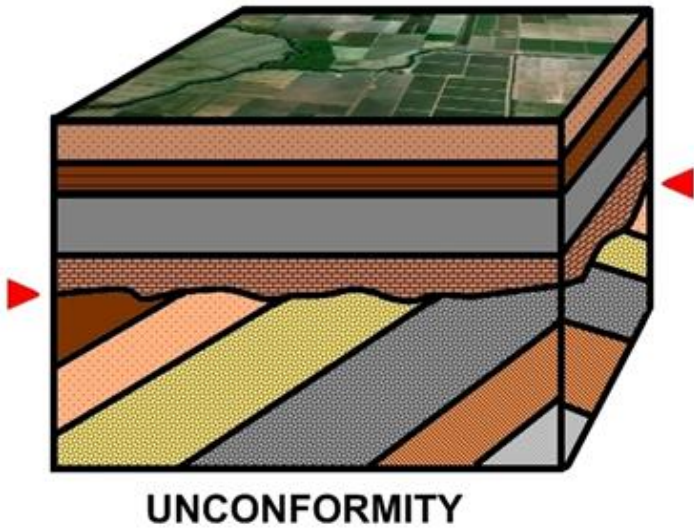
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## **Unconformity**

the contact between rock layers that are very different in age

It can occur when weathering and erosion remove existing rock layers



[http://www.classzone.com/books/earth\\_science/terc/content/visualizations/es2902/es2902page01.cfm?chapter\\_no=visualization](http://www.classzone.com/books/earth_science/terc/content/visualizations/es2902/es2902page01.cfm?chapter_no=visualization)

<http://www.absorblearning.com/media/item.action?quick=13f>

<http://www.bioygeo.info/Animaciones/Unconformity.swf>



## Activity 6

### Check Your Understanding

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1. What causes uplift and subsidence?

2. How do unconformities form?

3. Define and explain two major geologic principles.